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**Abstract**

**Cathode system for the electrolytic production of aluminum**

Cathode systems for the electrolytic production of aluminum, which are divided in the direction of their long axis on the side of the power conduction from the cathode into at least two parts having differing electrical resistances in such a way that the electrical resistance from the ends of the collector to the part of the marginal zone of the cathode facing the collector is at least 1.2 times the electrical resistance from the ends of the collector to the part of the middle of the cathode facing the collector, where either the contact composition or the collector is divided into zones of differing resistance, processes for producing them and their use in the electrolytic production of aluminum